

Hollin-Napo, Assessment Unit 60410101
Assessment Results Summary

[MMBO, million barrels of oil. BCFG, billion cubic feet of gas. MMBNGL, million barrels of natural gas liquids. MFS, minimum field size assessed (MMBO or BCFG). Prob., probability (including both geologic and accessibility probabilities) of at least one field equal to or greater than the MFS. Results shown are fully risked estimates. For gas fields, all liquids are included under the NGL (natural gas liquids) category. F95 represents a 95 percent chance of at least the amount tabulated. Other fractiles are defined similarly. Fractiles are additive under the assumption of perfect positive correlation. Shading indicates not applicable]

Field Type	MFS	Prob. (0-1)	Undiscovered Resources												Largest Undiscovered Field (MMBO or BCFG)			
			Oil (MMBO)				Gas (BCFG)				NGL (MMBNGL)				F95	F50	F5	Mean
Oil Fields	1	1.00	1,028	2,781	5,803	3,023	236	674	1,544	755	4	13	33	15	120	302	645	332
Gas Fields	6						0	0	0	0	0	0	0	0	NA	NA	NA	NA
Total		1.00	1,028	2,781	5,803	3,023	236	674	1,544	755	4	13	33	15				

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Monte Carlo Results

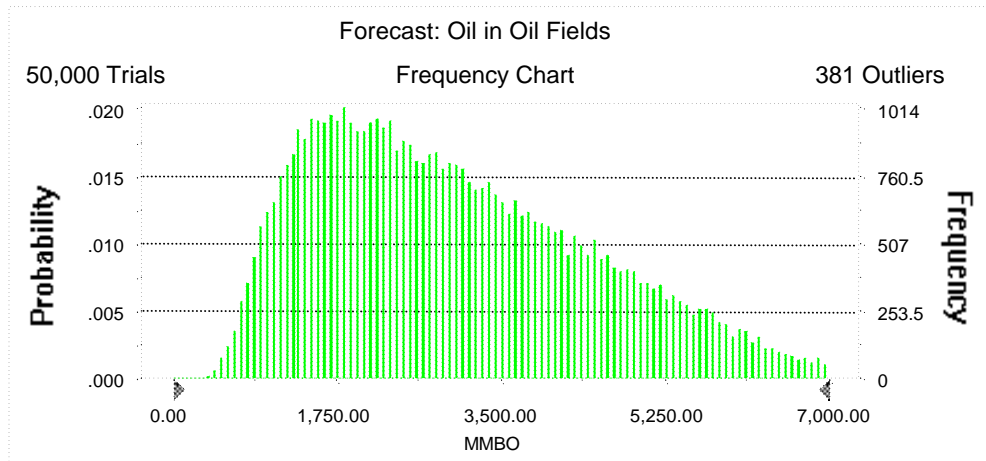
Forecast: Oil in Oil Fields

Summary:

Display range is from 0.00 to 7,000.00 MMBO
Entire range is from 314.82 to 9,975.94 MMBO
After 50,000 trials, the standard error of the mean is 6.68

Statistics:

	<u>Value</u>
Trials	50000
Mean	3,023.37
Median	2,780.59
Mode	---
Standard Deviation	1,493.85
Variance	2,231,593.88
Skewness	0.63
Kurtosis	2.77
Coefficient of Variability	0.49
Range Minimum	314.82
Range Maximum	9,975.94
Range Width	9,661.12
Mean Standard Error	6.68



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Forecast: Oil in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	314.82
95%	1,027.70
90%	1,265.36
85%	1,461.17
80%	1,641.99
75%	1,821.89
70%	2,002.89
65%	2,188.13
60%	2,369.86
55%	2,567.56
50%	2,780.59
45%	2,994.47
40%	3,219.88
35%	3,465.29
30%	3,730.54
25%	4,026.15
20%	4,351.54
15%	4,723.95
10%	5,185.04
5%	5,803.47
0%	9,975.94

End of Forecast

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Monte Carlo Results

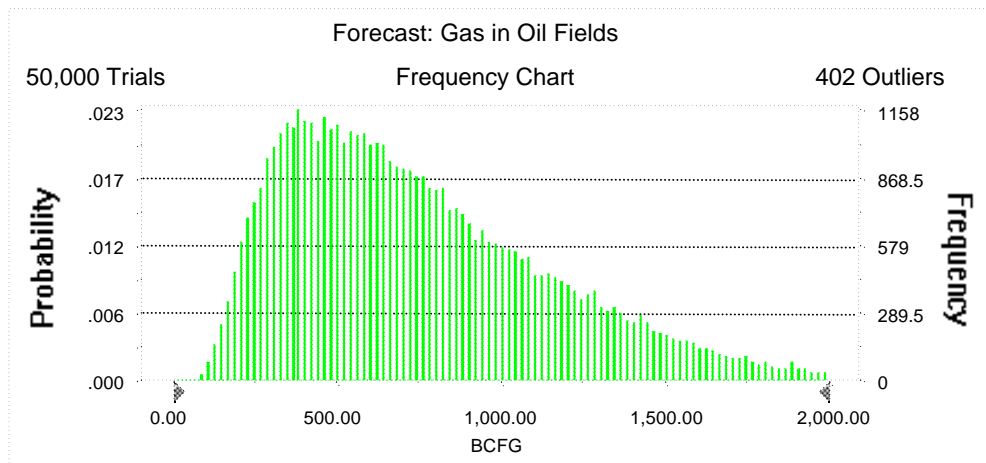
Forecast: Gas in Oil Fields

Summary:

Display range is from 0.00 to 2,000.00 BCFG
Entire range is from 62.56 to 3,192.74 BCFG
After 50,000 trials, the standard error of the mean is 1.84

Statistics:

	<u>Value</u>
Trials	50000
Mean	755.48
Median	673.56
Mode	---
Standard Deviation	412.09
Variance	169,820.00
Skewness	0.92
Kurtosis	3.69
Coefficient of Variability	0.55
Range Minimum	62.56
Range Maximum	3,192.74
Range Width	3,130.18
Mean Standard Error	1.84



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Forecast: Gas in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	62.56
95%	235.57
90%	296.37
85%	344.55
80%	389.91
75%	434.76
70%	480.90
65%	527.95
60%	574.51
55%	623.47
50%	673.56
45%	729.11
40%	785.51
35%	847.34
30%	917.32
25%	998.97
20%	1,090.61
15%	1,199.78
10%	1,339.18
5%	1,543.95
0%	3,192.74

End of Forecast

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Forecast: NGL in Oil Fields

Summary:

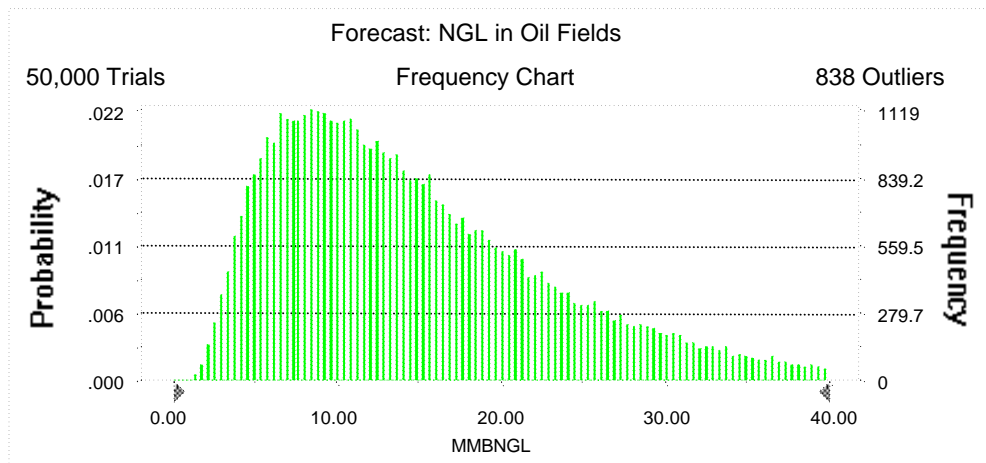
Display range is from 0.00 to 40.00 MMBNGL

Entire range is from 1.07 to 70.62 MMBNGL

After 50,000 trials, the standard error of the mean is 0.04

Statistics:

	<u>Value</u>
Trials	50000
Mean	15.12
Median	13.14
Mode	---
Standard Deviation	8.99
Variance	80.85
Skewness	1.17
Kurtosis	4.62
Coefficient of Variability	0.59
Range Minimum	1.07
Range Maximum	70.62
Range Width	69.55
Mean Standard Error	0.04



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Forecast: NGL in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	1.07
95%	4.35
90%	5.54
85%	6.52
80%	7.45
75%	8.37
70%	9.27
65%	10.19
60%	11.11
55%	12.11
50%	13.14
45%	14.24
40%	15.43
35%	16.70
30%	18.20
25%	19.88
20%	21.81
15%	24.28
10%	27.59
5%	32.76
0%	70.62

End of Forecast

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Forecast: Largest Oil Field

Summary:

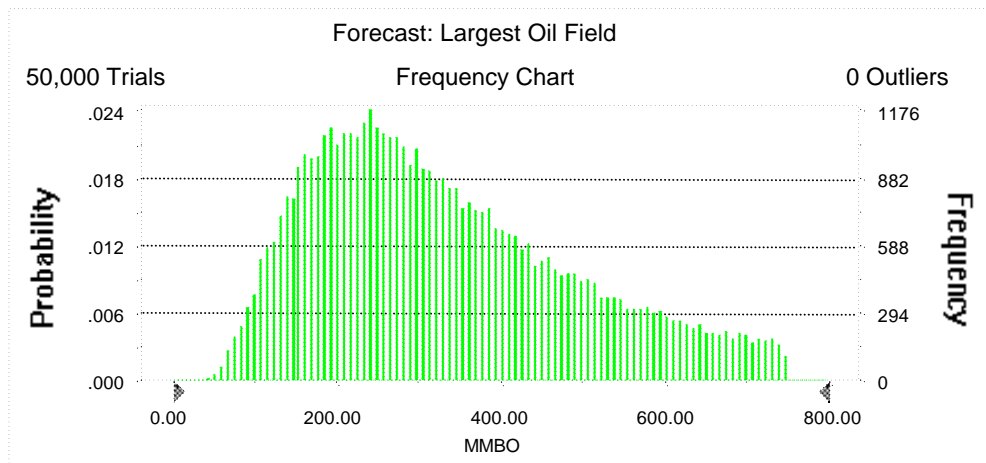
Display range is from 0.00 to 800.00 MMBO

Entire range is from 27.10 to 749.96 MMBO

After 50,000 trials, the standard error of the mean is 0.71

Statistics:

	<u>Value</u>
Trials	50000
Mean	332.17
Median	302.23
Mode	---
Standard Deviation	158.77
Variance	25,208.10
Skewness	0.64
Kurtosis	2.65
Coefficient of Variability	0.48
Range Minimum	27.10
Range Maximum	749.96
Range Width	722.86
Mean Standard Error	0.71



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Forecast: Largest Oil Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	27.10
95%	120.34
90%	148.29
85%	169.44
80%	189.75
75%	208.31
70%	226.95
65%	244.98
60%	262.72
55%	281.88
50%	302.23
45%	323.98
40%	347.45
35%	373.38
30%	401.04
25%	433.28
20%	471.12
15%	515.44
10%	572.74
5%	645.38
0%	749.96

End of Forecast

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Assumptions

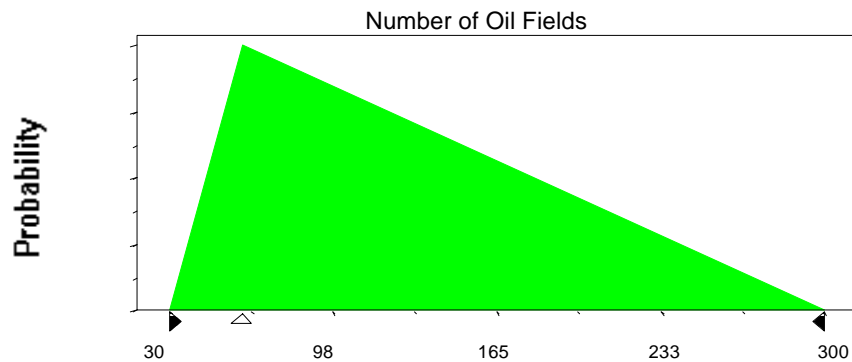
Assumption: Number of Oil Fields

Triangular distribution with parameters:

Minimum	30
Likeliest	60
Maximum	300

Selected range is from 30 to 300

Mean value in simulation was 130



Assumption: Sizes of Oil Fields

Lognormal distribution with parameters:

Mean	23.53
Standard Deviation	65.11

Shifted parameters

24.53
65.11

Selected range is from 0.00 to 749.00

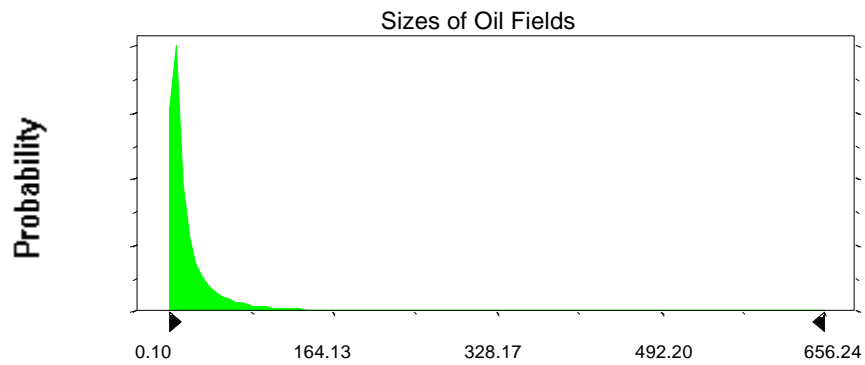
1.00 to 750.00

Mean value in simulation was 22.28

23.28

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Assumption: Sizes of Oil Fields (cont'd)



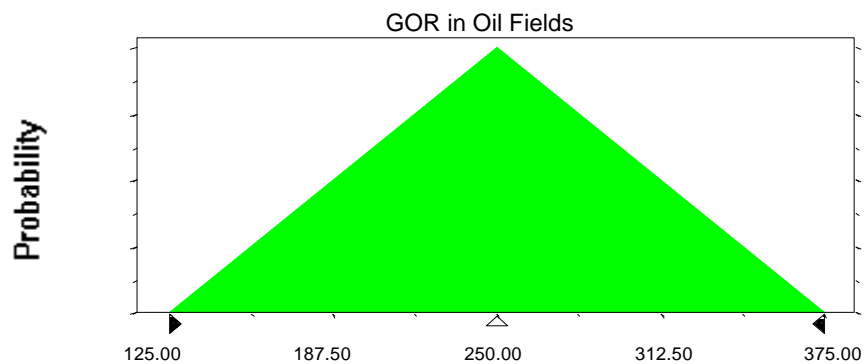
Assumption: GOR in Oil Fields

Triangular distribution with parameters:

Minimum	125.00
Likeliest	250.00
Maximum	375.00

Selected range is from 125.00 to 375.00

Mean value in simulation was 249.84



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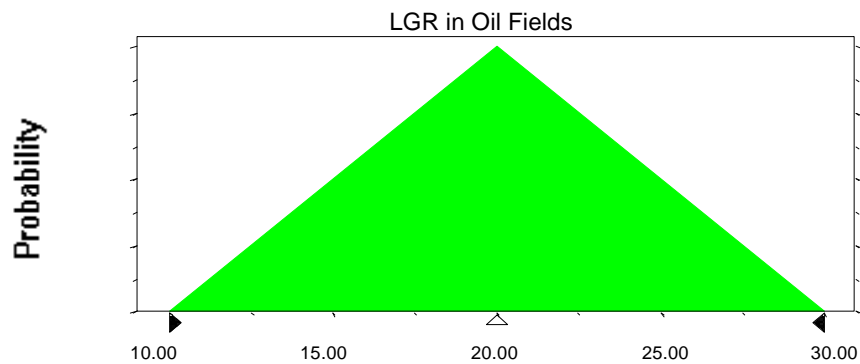
Assumption: LGR in Oil Fields

Triangular distribution with parameters:

Minimum	10.00
Likeliest	20.00
Maximum	30.00

Selected range is from 10.00 to 30.00

Mean value in simulation was 20.01



End of Assumptions

Simulation started on 2/24/99 at 16:07:34

Simulation stopped on 2/24/99 at 17:15:14